The Cary Arboretum

of The New York Botanical Garden

A Newsletter published for Friends of the Arboretum
by the Public Affairs Department.

March-April, 1983

Box AB
Millbrook, N.Y. 12545

Volume IX, Number 2

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Cary to Have Greater Focus on Ecology; Dr. Gene Likens to Join Staff

Dr. Gene Likens

New York Botanical Garden President Dr. James M. Hester announced in mid-February that Dr. Gene E. Likens, currently Chairman of the Section of Ecology and Systematics Charles A. Alexander Professor of Biological Sciences at Cornell University, will join the Garden in September as Director of the NYBG Institute of Ecosystems Studies. Dr. Likens, a member of the National Academy of Sciences, will also hold the positions of New York Botanical Garden Vice President, and Director of the Cary Arboretum.

Dr. Likens is recognized internationally for his research on the biogeochemistry of natural systems. Together with Dr. F. H. Borman of Yale University, Dr. Likens initiated and developed the Hubbard Brook Ecosystem Study, which has become the model for ecological and biogeochemical research. The success of the Hubbard Brook program has had a profound impact on the field of ecosystem science.

Born in Piercetown, Indiana, Dr. Likens received his B.S. from Manchester College in 1957; an M.S. from the University of Wisconsin, Madison in 1959, and his Ph.D. from the same university in 1962. As Director of the NYBG Institute of Ecosystems Studies, Dr. Likens will be responsible for developing an ecological research and educational program that will advance the science of ecology and contribute to the clarification of public policy in this critical area. Dr. Likens' appointment follows an extensive two-year search by the New York Botanical Garden to find a leading ecologist capable of using the exceptional resources of the Arboretum through a focused ecological research and educational program.

As NYBG Vice President and Director of the Cary Arboretum, Dr. Likens will succeed Dr. Willard Payne who has served in this capacity since 1977. "We are most grateful to Dr. Payne for the outstanding job he has done in directing the Cary Arboretum during this period of development," said Dr. Hester. "Upon the advice of several expert committees, the Garden has decided to focus the Arboretum on ecological research and education, and this has mandated the appointment of a leading ecologist. The fine developmental work that Dr. Payne has done has brought the Arboretum to a level at which such an appointment can be made."

In My Second Home — Cary Arboretum

by Sun An-ci

Editor's Note:

During the past year, Dr. Sun An-ci, Research Associate for the Academy of Science at the Botanical Institute of Peking, China, has been on sabbatical at the Cary Arboretum as part of a cooperative research program between the Peking Institute and the Arboretum. The following article chronicles her impressions of the Cary Arboretum and life in the United States. Editorial assistance was provided by Arboretum Research Assistant Lydia Newcombe.

When I first came to the Cary Arboretum on February 19th, 1982, I was surprised to see how big it is, with dense forests and hills up and down forming a beautiful landscape. The buildings are so isolated. As you walk down the road, you rarely meet any people; it is so quiet and peaceful. This is very different from my working environment at the Peking Botanical Institute, which is located in the west part of Beijing city, close to the Beijing Zoo. One of the herbaria is situated in the zoo. A theater, a bus terminal, and the Capital Stadium are nearby. The Institute was once an official residence in the Qing Dynasty (1644-1911), when the area consisted of a set of scattered ancient structures. It was restored and rebuilt after the Liberation (1949). One of the temple-like buildings is still in use as the library of our Institute.

The way the Arboretum buildings are designed to blend with the natural topography has left a deep impression on my mind. The Lovelace House, where I lived for four months, is built into the slope of the hillside, so that the first story is on ground level in front while the second story meets ground level in the back. At the beginning, I was not used to the slope at the front door. As I walked out I felt as if I would fall down. This is because it is common in China to grade the earth flat in front of the door. I also like the way the front deck of the Plant Science Building winds around existing trees and

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Dr. Payne Participates in Asian Program

Arboretum Director Dr. Willard W. Payne participated in a seminar on Under-Exploited Economic Plants held in mid-December at the Taiwan Forestry Research Institute, Taipei, China.

The seminar, co-sponsored by the College of Agriculture, National Taiwan University, and the New York Botanical Garden, brought together both Asian and American leaders in the field of economic plants.

Topics addressed during the five-day program included the distribution and cultivation of edible Canna in Taiwan; the taxonomy of several economic plants of Asian concern; economic forest trees of Asia and the Pacific; and the ethnobotany of Kudzu vines and their relatives.

"Fuel and Fertilizers from Agricultural Wastes: An American Experiment," the title of the paper presented by Dr. Payne, outlined the use of biomass fuels produced from agricultural wastes, and of the liquid and solid fertilizers that remain after fermentation. Highlighted was a description of a fermentation process developed in Guatamala and under experimentation at the Cary Arboretum.

Wappingers Creek Trail Project Underway

Seasonal guides, signs and cassette tapes that will increase the educational value of the Wappingers Creek Trail are currently being developed as a result of a grant from the Natural Heritage Trust in the amount of $11,500.

Through autumn, 1983, naturalist/writer/artist Philip Knitzer will monitor the trail, observe trees, herbaceous flowers, ferns and fern allies, and incorporate them into descriptive seasonal guides and cassettes that will be available for use by the public.

Metal photo signs with drawings of specific plants and descriptions of their growth characteristics will draw attention to over 100 species of plants along the one-mile trail, which traverses a variety of habitats.

"The Wappingers Creek Trail is the part of the Arboretum most accessible to the public," says Arboretum Education Coordinator Dr. Peter Dykeman. "Its terrific diversity is especially suited for an outdoor classroom – where people can experience and learn about nature."

The first seasonal trail guides and tapes will be available during autumn, 1983, and can be obtained through the Gifford House Education Center, Route 44A.

In My Second Home – Cary Arboretum

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vegetation, giving the path an artistic effect. It has double meaning in that it is protecting the vegetation as well as looking nice.

I am impressed with the protection and good condition of natural resources, vegetation and wildlife here, as well as with building designs that avoid destroying the original vegetation. Very often the deer and squirrels jumping across the road make the Arboretum look like a natural zoo. The people I see driving on the roads are always careful of these animals. In winter my pretty housemate at the Bee House (Dee Honkala) puts out bird feeders to help various kinds of birds through the difficult times.

It is because the vegetation is kept so natural that I am able to return at various times during the year to a certain woodland hillside that we call "buttercup heaven" to collect buds and flowers of the early spring-flowering *Hepatica acutiloba, Anemonella thalictroides,* and species of *Aquilegia* (columbine) and *Ranunculus* (buttercup) at all stages of development. I have been working in Dr. Elias' laboratory for one year now on embryology of the Ranunculaceae, a family of systematic magnificence and medicinal importance in China. By studying the cellular structure at each stage of embryo formation, I am working toward a comparison of the flowering biology of both North American and Asian members of this family. Also, I work with Dr. Elias on the native Chinese plant *Mallotus* in a study of the structure of its extrafloral nectaries, and at the same time I am learning the methods of thin section preparation of plant tissues.

One of my main impressions of laboratory work here is the popular use of computers in every lab of the Arboretum to search references, organize and store data, and write papers. It seems very efficient and convenient. I would like to learn how to operate the computer because I believe that it will become increasingly employed in our field in the future. Another observation is the great number of students participating in the research programs. Here they can receive applied training in their field and get credit from their schools as well.

Since I came here, great changes have taken place in my daily life. First of all, the most conspicuous difference is transportation. At home the most popular form of everyday travel is the bicycle, although I take the bus to work as it is more convenient. However, in Millbrook, it seems to me that I have no legs at all. Without a car one can go nowhere here; I could not collect buds and flowers, or go shopping . . . Fortunately people take care of me and offer me rides.

In our workday in China, we take a break at 10 a.m. and again at 3:30 p.m. but instead of taking coffee breaks, we do group exercises for fifteen minutes. Some people go jogging, some do taiji, a graceful, slow and stylized exercise that is also called Chinese boxing, and some do qigong, an inner mental exercise that uses breathing to stimulate circulation of the blood. But we also have the option to continue working through our break, or to do as we wish. I prefer doing exercises as they relax me during a day of eye-straining microscope work. Some people consistently do their exercises in the early morning, every day. They feel stronger and in higher spirits due to exercise.

We all eat lunch together in the Institute's cafeteria dining room, as we prefer a hot meal at noontime. Rice, steamed bread and a variety of other dishes are served. Here at the Arboretum, I prepare my lunch at home and usually eat in the laboratory. Although I have become accustomed to a sandwich and crackers with soup for lunch, rice and noodles are still my favorite. I am not used to cold milk and wine. At home we have one hour for lunch in the winter and 1½ hours in the summer so that we can walk into the zoo to watch the pandas and swans, or take a nap. We work six days a week, which leaves Sunday to do the housework, laundry and grocery shopping. Usually a husband and wife who both work share in these weekend duties, and this leaves time to go to a movie or take the children to the park. My son Wang Wei, 10 years old, likes to play chess and sometimes asks his father to play with him.

Dr. Sun An-ci stands outside the Arboretum's Plant Science Building. Emil Keller, Photographer.

Since more and more Chinese women take jobs and participate in social activities, who takes care of the children? When my daughter Wang Lei, now 16 years old, was a little baby, my mother took care of her; however, my son was sent to kindergarten, and I took him home after work. There are two kinds of kindergarten: one takes the children during the daytime only, while the other boards the children for the whole week and sends them home for the weekend. The concept of kindergarten is developing and pre-school education is emphasized more now.

I hear from my family very often and I miss them. But my motherland and my people place their hopes on the middle-aged and young generations. Being a middle-aged intellectual I am expected to learn more new concepts and techniques to bring back to China. I should take charge and I feel honored to devote my efforts to the modernization of our developing country. For this reason I would like to remain in the United States a little longer, studying and collecting plant materials to take back with me. The people I work with are very warm and friendly and I feel that Cary Arboretum is like a second home.

The Biology of Nectaries Published

The Biology of Nectaries, edited by Arboretum Assistant Director Dr. Thomas S. Elias and Dr. Barbara Bentley, Associate Professor, SUNY at Stony Brook, was released in January, 1983 by Columbia University Press.

This 241-page volume brings together much of the important work being done by nectary biologists. Nectaries, structures which secrete a solution rich in sugars, are usually found in flowers, but also on leaves, stems, and even young fruits. These organs are critical to the intricate mutually beneficial relationships which exist between many insects and plants – pollination for example. Twelve contributors to the book provide data concerning the structure of evolution of nectaries, nectar production and its chemistry, ecology of nectar robbing, and much more.

The Biology of Nectaries can be ordered through the Arboretum's Gift Shop located in the Gifford House. Gift Shop hours are Tuesday through Friday, 11 a.m. to 4:30 p.m. and weekends, 1:30 to 4:30 p.m.

Meet the Authors on May 7

Dr. Thomas Elias and Dr. Peter Dykeman, authors of *Field Guide to North American Edible Wild Plants* will be on hand Saturday, May 7 for special lectures and field programs.

Participants in the program, which is free of charge, will meet with Drs. Elias and Dykeman for an introductory talk on edible wild plants, followed by a walk through the Arboretum grounds to identify them. Afterwards, samples of prepared wild foods will be available for tastetesting. Autographed copies of the book will be available.

"Meet the Authors" will be offered in two sessions: 9:00-11:30 a.m., and 1:00-3:30 p.m. Pre-registration through the Gifford House is recommended.

Urban Horticulture Symposium Set for June 21-23

An International Symposium on urban horticulture entitled "Improving the Quality of Urban Life with Plants" will be held at the New York Botanical Garden June 21-23.

The symposium, chaired by Dr. David Karnosky, Arboretum Forest Geneticist and NYBG Director of the Institute of Urban Horticulture, will include five sessions focusing on the importance of plants in urban environments: improving plant appreciation in urban areas; innovative design concepts for urban environments; urban plant pests and other stresses; and selecting and breeding better plants for urban areas.

Field trips to view parks, atria and gardens in the New York City area will be included in the three-day event. For additional information, contact Dr. Karnosky at (914) 677-5343.

At the Garden

"Salute to Chelsea," a major horticultural presentation inspired by the Chelsea Flower Show held annually in London, England, opens in the New York Botanical Garden's Enid A. Haupt Conservatory on April 20.

Through May 20, the exhibit will contain both indoor and outdoor displays of British horticulture. A garden of trellised roses (the official flower of both Britain and New York State); a Medieval garden with an authentic sweet pea-covered imported wattle fencing, and a thatched-roof gardener's cottage surrounded by perennial flower borders will be among the displays featured.

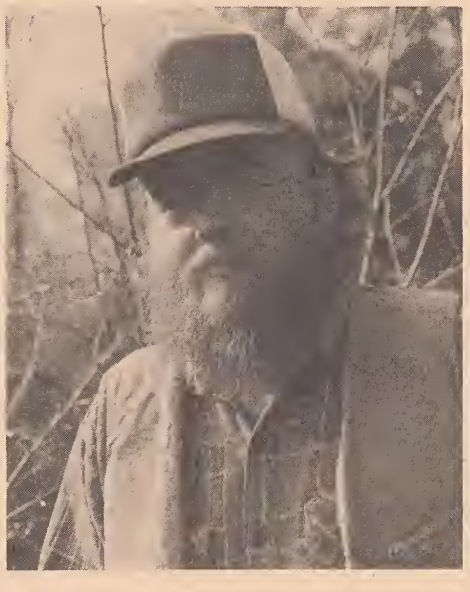
The Garden's Education Department has scheduled a number of special programs to coincide with "Salute to Chelsea." For information on these, and other education events at the Garden, call (212) 220-8747.

The second annual Greater New York Orchid Society Show will be held in the Conservatory May 25-29. Featured will be massive displays of orchids exhibited by commercial and private growers from throughout the country. A plant sale, lectures and demonstrations will be ongoing throughout this five-day event.

The Enid A. Haupt Conservatory is open Tuesday through Sunday, 10 a.m. to 5 p.m. Members of the Arboretum are admitted free to the Conservatory, and Wednesday is "Free Day," when the general public is also admitted without charge.

For more information, contact Robin Parow-Place, (914) 677-5343.

People at the Arboretum



Robin Parow-Place, Photographer

John Olson

John Olson, Gardener, . . . At home playing first base, this competitive softball player is a member of The Poughkeepsie Mannermen – a team with a rigorous schedule of 125 games per year throughout the northeast. During the past seven years, John has played on various local softball teams, subsequently winning five New York State Champion titles and 12 tournaments. He was voted Most Valuable Player twice during that time.

John grew up on a 350-acre dairy farm, part of which was rented from Mary Flagler Cary. He attended Millbrook High School and went on to major in business administration in college, but soon realized that an office job could never suit him. "I've always liked working outdoors," he says, "especially with the equipment I used while growing up on the farm."

In 1972, John joined the Arboretum staff and was soon reintroduced to mowers, tractors and a variety of other equipment. In addition, he was trained in pruning, spraying and planting techniques, both in the Arboretum's greenhouse complex and nursery area.

John and his father Oscar, also an Arboretum gardener, occasionally have the opportunity to work together during the winter months. Like his father, John enjoys the diversity his position offers, and the gratification of working outdoors from season to season.

John and his wife Sandy live in Salt Point with their children Michael, 1½, and Erin, 10 months. When asked how he pictures the Arboretum 20 years from now, he smiled, stating, "Come see me then; I'll be here!"

Around the Arboretum:

Maple Sugaring Weekend

Join Cary Arboretum staff and volunteers for the ninth annual Maple Sugaring Weekend March 12 and 13, 11 a.m. to 4 p.m. on the Gifford House grounds.

In addition to the usual lectures and demonstrations of the maple sugaring process from tapping to candy-making, a pancake and sausage all-you-can-eat luncheon will be available including homemade butter, sausage, and, of course, maple syrup.

Since maple sugaring is a traditional activity of native American Indians, much of the focus of Maple Sugaring Weekend will be on ethnobotany – the study of man's interaction with nature throughout history. Several late-winter activities of native Americans and colonists will be presented.

Prices for Maple Sugaring Weekend are as follows:

Entrance fee:	Adults	$3.00
	Senior Citizens	$2.50
	Children (5-12)	$1.50
	Members	$2.50
Luncheon Fee:	Adults (13 & up)	$3.75
	Senior Citizens	$3.75
	Children (5-12)	$2.50
	Children (under 4)	Free

At a Glance

Note: Unless otherwise stated, the following activities will take place at the Gifford House Education Center, Route 44A, Millbrook (914) 677-5358.
March 12 and 13
Maple Sugaring Weekend – see related article, this issue.
March 25, 11 a.m.-4 p.m.
March 26, 9 a.m.-4 p.m.
March 27, 1 p.m.-4 p.m.
Sixth Annual Plant and Gift Sale, Gifford House.
March 26
Plant Care Clinic, 9 a.m.-noon. Greenhouse. See related article, this issue.
April 8
Turkey Hunting and Calling in the Spring, 7-10 p.m.
April 12
First in a series of 6 classes: "Sketching In and Outdoors," 3:30-5:30 p.m.
April 14
First in a series of 6 classes: "Outdoor Watercolor," 3:30-5:30 p.m.
April 16
One-day workshop: "Twined Wicker Basketry," 10 a.m.-4 p.m.
April 17
Slide lecture: "Some Australian Flora and Fauna," 3 p.m.
May 2
Workshop: "Dried Bouquet Materials," 1-3 p.m.
May 7
Spring Fever Day Run. 10,000 meter (6.2 mile) road race; 1 mile time estimation for joggers; 1 mile race for children. Pre-registration required.
May 7
Meet the authors of *Field Guide to North American Edible Wild Plants.* (See related article, this issue.) Two sessions 9:00-11:30 a.m. and 1:00-3:30 p.m. No charge.

Plant Care Clinic

An annual event of value to anyone who grows houseplants, the Arboretum's Plant Care Clinic will be held March 26, 9:00 a.m. to noon at the greenhouse complex, Route 82.

Members of the Arboretum are invited to have three plants repotted free, (one large tub may be substituted for three less-than-12" pots), and non-members will be charged a repotting fee of $1.00 per pot. Both Cary members and the general public must bring all pots or containers for repotting.

THE CARY ARBORETUM
of
THE NEW YORK
BOTANICAL GARDEN

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